DOCUMENT RESUME

ED 221 783 CG 016 209

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TITLE Facts about Alcohol and Alcoholism.
INSTITUTION Wisconsin Clearinghouse for Alcohol and Other Drug Information, Madison.
SPONS AGENCY National Inst. on Alcohol Abuse and Alcoholism (DHHS), Rockville, Md.
PUB DATE 80
CONTRACT NIAAA-HSM-42-73-77
NOTE 51p.
AVAILABLE FROM Wisconsin Clearinghouse, 1954 E. Washington Ave., Madison, WI 53704.

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Alcohol Education; *Alcoholism; *Drinking; Drug Abuse; *Drug Rehabilitation; *Physiology; *Prevention; Social Agencies; State of the Art Reviews; Youth Problems

ABSTRACT

Recognition of alcoholism as a treatable illness is a result of public education based on scientific facts. This publication, a digest of a more detailed survey of research about drinking and alcoholism, presents information about alcohol and its effects on individuals and society. It provides facts about the short-term and long-term effects of alcohol on perception, emotions, sexuality, and sleep, and describes the nature and scope of problem drinking. Diagnosis, treatment, and rehabilitation of alcoholism are discussed. The report also deals with the parents' role in the prevention of alcohol abuse among adolescents. Additionally, a helping network consisting of volunteer organizations, government and industry-sponsored programs, and medical resources is described. (JAC)

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facts about Alcohol And Alcoholism

Leonard C. Hall

CG 016209

WISCONSIN CLEARINGHOUSE
for Alcohol and Other Drug Information
1954 E. Washington Av.
Madison, WI 53704

This publication was prepared by Leonard C. Hall under Contract No. HSM–42–73–77 with the National Institute on Alcohol Abuse and Alcoholism.

FOREWORD

America is a nation of drug takers. Far too many Americans are drug-misusers. By whatever standard we weigh the drug situation: numbers of users, abusers, availability, cost in dollars, death, disease, violence, shattered lives—alcohol is number one.

Not long ago, the parents of America heaved a collective sigh of relief as drug abuse among the young apparently reached a peak and began to subside. Yet, every indicator now shows that among American youth the switch is on—from a variety of other drugs to the most devastating drug of all: alcohol.

We still have not learned—despite years of painful experience—that we cannot achieve responsible use of alcohol and other drugs solely by crackdown, by law, by moralizing, by scare tactics. They have not worked; they do not work.

The answer lies in a general awareness and understanding of the entire problem; in the human compassion that springs from such factual knowledge; in treatment programs which reflect that compassion and respond to individual human needs and differences; and finally, in the persistent cultivation of a sense of responsibility to self and society.

This publication presents factual information about alcohol and its effects on man and society. It is a digest of **Alcohol and Alcoholism,** which is a more detailed survey of research about drinking and alcoholism.

The booklet can provide information. But, information and education are not the same thing. Education results when one uses the information to analyze and guide the activities of daily life. Such analysis should help a person to examine his own attitudes toward alcohol and encourage him to make responsible personal decisions about drinking.

We hope the booklet will make clear the necessity for every citizen to recognize alcoholism as the illness that it is, to help those who need treatment to receive it, and to provide, through their own behavior and education of their children, a model of responsible drinking which may prevent alcoholism from ever developing.

Morris E. Chafetz, M.D.
Director
National Institute on Alcohol
Abuse and Alcoholism

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I

ALCOHOLIC BEVERAGES AND MAN:
Pleasures, Problems, and Prohibitions

Many people who write in for information about problem drinking and alcoholism make it clear that they want "the facts about drinking, not moral judgments."

This attitude is new, and encouraging. It indicates that the worried drinker, those close to him, and concerned citizens realize that alcohol abuse is not sin and moral weakness. In the past, it was moral condemnation that helped make alcoholism a hidden illness and burdened its victims with a crippling stigma.

More people now accept alcoholism as an illness that can be treated with an encouraging level of success. Many also share the belief that alcoholism can be prevented.

This recognition of alcoholism as a treatable illness is a result of public education based on scientific facts. Much remains to be learned about the causes and more effective treatment of alcoholism. But, there has been enough tested and proven experience with the illness to justify new hope for renewal of the lives of alcoholic persons and of those close to them.

Ethanol—An Ancient Drug

There is no mystery about man's ancient drinking partner—alcohol. This chemical compound known as ethyl alcohol or ethanol, with the chemical formula CH_3CH_2OH, has power to induce feelings of well-being, sedation, intoxication, and unconsciousness. Other alcohols, including household methyl and isopropyl, have toxic effects that make them taboo for drinking. Ethanol, the active and desirable (for many) ingredient in distilled spirits, wines, and beers is the only one called simply "alcohol."

It was inevitable that man should possess alcoholic beverages, for they are literally products of nature. They were presumably discovered, rather than invented, in prehistoric times. A mash of fruit or berries left exposed

to the action of airborne yeast spores in a warm corner of cave or hut would be fermented into crude wine. The early men who tasted the product of this natural fermentation must have felt effects far more exciting than mere satisfaction of hunger and thirst.

The presence of wine and beer is shown in the archeological records of the oldest civilizations and in the diets of most primitive peoples. It seems certain that men quickly proceeded from accidental discovery to purposeful production of alcoholic beverages.

From prehistoric times until about 500 years ago, alcoholic beverages were made by fermentation and consisted of wines and beers containing, at most, about 14 percent alcohol. This upper limit of alcohol content was fixed by the inability of the yeasts to survive in stronger solutions of alcohol.

Development of distillation in Europe, beginning in the 15th century, produced a new and stronger beverage—the spirit of wine—and soon the spirit of any fermented fluid from any source—grains and tubers as well as fruits and other berries besides grapes. Instead of beer and wine containing between 6 and 14 percent alcohol, beverages containing 50 percent or more could be drunk. Distilled spirits gained immediate acceptance among those who wanted a quicker or more potent effect.

The basic characteristics of alcoholic beverages have remained much the same through countless generations of drinking people. The bottles colorfully displayed in today's package store contain the old recipes refined by technology and mass-produced. Aside from individual interests in age, vintage, bouquet, and flavor, the significant characteristic of each beverage—the reason it is bought and consumed—is the amount of the active ingredient, alcohol, that it contains.

Characteristics of Alcohol

Alcoholic beverages have been and continue to be made and used by nearly every people that has inhabited the earth. What are the qualities of alcohol that make it so nearly universal in its appeal?

Man from his earliest times apparently was fascinated by the mood-changing effects of these fluids, regarding them as useful and beneficial.

In addition to their mood-changing properties, the crude alcoholic beverages were valuable foods; the nutrients of the raw materials, including vitamins and minerals, were conserved. By comparison, the alcoholic beverages distilled by modern technology contain no minerals, vitamins, carbohydrates, proteins, or related essentials for physical well-being. Yet one food value remains: alcohol itself is a rich source of calories usable for heat and energy. Each fluid ounce of 100-proof distilled spirits yields about 100 calories. In beer, some additional calories, about four per ounce, survive from the grain.

Alcohol is also a drug which acts upon the central nervous system—the brain. As medicine, alcohol has a long and respectable record. While it

has no curative powers, it is still widely used by physicians as a tranquilizer or sedative for convalescent and geriatric patients. Until recent times, alcohol was the best anesthetic available to surgeons. Its medical use brought it into the list of drugs, where it remains today.

How Alcohol Was Used

Before written history there is evidence of the use of beer and wine in religious ritual, both as a salute to the gods and as a sacred drink whereby man could receive the "divine" power of the alcohol.

Long before the Christian era, however, alcoholic beverages were diverted from religious to common use. Undoubtedly its traditional role in religion gave respectability to the use of alcohol on nonreligious but important occasions. Alcoholic beverages became mandatory not only in worship and in the practice of magic and medicine, but also to celebrate councils, crownings, warmaking, peacemaking, festivals, to show hospitality, and observe the rites of birth, initiation, marriage, and funerals.

Alcoholism Is Not New

The everyday use of wine and beer sometimes led to drunkenness and to personal and social troubles. Drunkenness, and what has become known as alcoholism, were problems among the Greeks and Jews, as well as among the peoples of the Middle East, India, and China. Leaders made numerous attempts to reform or control drinking excesses.

Moderation has been the most frequently recommended remedy. One of the oldest temperance tracts was written in Egypt about 3,000 years ago:

> Take not upon thyself to drink a jug of beer. Thou speakest, and an unintelligible utterance issueth from thy mouth. If thou fallest down and thy limbs break, there is none to hold out a hand to thee. Thy companions in drink stand up and say: "Away with this sot." And thou art like a little child.

Similar sentiments in Greek, Roman, Indian, Japanese, and Chinese writings, and in both the Old and New Testaments, denounce excessive drinking.

Temperance In America

In this country, by 1619, 12 years after alcoholic beverages were brought to America with the settling of the Virginia Colony, their excessive use resulted in a law decreeing that any person found drunk for the first time was to be reproved privately by the minister; the second time publicly; the third time to "lye in halter" for 12 hours and pay a fine. Yet in the same year, the Virginia Assembly passed other legislation encouraging the production of wines and distilled spirits in the colony. It was not

the custom of drinking that was unacceptable in early Virginia, but drinking to excess.

Thus, notions that drunkenness or alcoholism are modern phenomena, or linked with poverty or wealth or industrialization or advertising are oversimplified and ignore history. Drinking, alcohol abuse, and efforts to control one or both have been with us for a long time.

The modern campaign for moderation—the temperance movement—came to America in the early 1800's. It began with the goal of temperance in its literal sense: moderation. In the 1830's at the peak of this early campaign, temperance leaders, many of whom drank beer and wine, maintained that the remedy for intemperance was abstinence from distilled spirits only.

The next decades brought a significant change. The meaning of temperance gradually altered from moderation to total abstinence. All alcoholic beverages were attacked as unnecessary, harmful to health, and inherently poisonous. The demand arose for total prohibition.

In 1919 the prohibitionists secured the 18th Amendment to the U.S. Constitution, making it illegal to manufacture or sell any alcoholic beverages. From 1920 to 1933, the Amendment remained in effect, shaping the Nation's social patterns, economy, and its underworld life. Even now, 40 years later, prohibition remains a controversial subject.

How Many Drinkers and Abstainers Now?

Whatever one's views on the gains and losses, the impact of prohibition on our subsequent attitudes toward drinking was great. The national experiment of prohibition was rejected, and today it is generally accepted that those adults who wish to drink have the right to do so.

The role of alcohol in health and social problems in postprohibition America is indicated by some basic facts about the number of drinkers and the quantities of alcoholic beverages they consume.

For 1970, the projected total number of drinkers in the United States 15 years of age and over was 95,648,000—nearly 44 million women and girls, and more than 52 million men and boys. Other surveys showed that, in recent years, about 57 percent of boys and 43 percent of girls aged 15 through 20 years are drinkers.

About one in three adults in the United States are nondrinkers at the present time.

The tax-paid alcoholic beverages—distilled spirits, wines, and beers—apparently consumed in 1970 by the average person in the drinking-age population, contained 3.93 gallons of absolute alcohol. This is alcohol—not total volume of drinkables. It allows for each drinker, about 44 fifths of whiskey; or 98 bottles of fortified wine; or 157 bottles of table wine; or 928 bottles of beer. The average may also be illustrated as a little over 3 ounces of whiskey a day, or the equivalent in other beverages—for example, one cocktail, one glass of wine, and a bottle of beer a day.

These calculations allot the alcoholic beverages to an "average" drinker. The average drinker, of course, is a myth. The country probably does not have a single man or woman who consumed exactly 3.93 gallons of alcohol during 1970. Nor an individual who divided this quantity evenly over all the days of the year. Residents of different regions and States drink different average quantities each year. The average male drinker consumes three times as much as the average female drinker, and the average alcoholic person takes about 11 times as much as the average nonalcoholic person who drinks.

If we accept reliable estimates that about 9 million people in this country are alcoholic and problem drinkers, then the average drinker with no alcohol related problems actually drinks much less than the national average of 3.93 gallons of alcohol. Thus, as surveys confirm, this Nation has millions of occasional and very moderate drinkers.

Recognizing, however, that many Americans are drinking to excess, endangering the lives and welfare of themselves, their families, and all those around them, many forces are working to encourage personal and social controls, to provide medical, psychiatric, and social services for those whose drinking is out of control, and to create a new climate in which every individual understands the effects of alcohol, and accepts responsibility for its intelligent, considerate use—if he chooses to drink.

II

UNDERSTANDING ALCOHOL AND ITS EFFECTS

Considering the long experience of man with alcohol, it is surprising how many experienced drinkers are relatively ignorant of the way their favorite beverages affect them, for better and for worse. The same applies to their nondrinking families and friends who may be concerned about why the drinker behaves as he does.

The fact is that until recent years when drinking problems forced public concern, there was little factual alcohol and health information available. There was a library on how to mix exotic drinks, but not much about what happens after the drinking starts.

A grasp of the known facts about the effects of alcohol on the body—both short-term and long-term—is essential to the person who wants to drink responsibly, and to those who want to understand the social custom of drinking, problem drinking, and alcoholism.

SHORT-TERM EFFECTS

Most people drink alcoholic beverages to get feelings of pleasure as well as relief from tension. No doubt this is the reason for the popularity of alcohol as a social beverage. Drinking is such a familiar part of our lifestyle that it is hard to realize that alcohol is a drug—every bit as active in the body as prescription drugs that are usually taken as pills in carefully regulated dosages.

Alcohol's primary effects are in the central nervous system, the brain, although the whole body is affected. The familiar signs of drunkenness, such as slurred speech and unsteady gait, are not due to the direct action of alcohol on the tongue or legs, but by its effects on the parts of the brain which control their activities.

How Alcohol Goes To Work

Alcohol can act as a stimulant at low doses, and as a brain depressant at higher doses. The speed with which alcohol brings drunkenness, and

drunken behavior, depends upon the rate of its absorption into the blood stream and (importantly) on the drinking history of the individual, what he wants and expects to happen.

Unlike other foods, alcohol does not have to be digested slowly before reaching the blood stream. It is immediately absorbed into the blood, having passed directly through the walls of the stomach and small intestine. The blood rapidly carries it to the brain.

Alcohol is metabolized, or burned and broken down, in the body at a fairly constant rate. As a person drinks faster than the alcohol can be burned, the drug accumulates in his body, resulting in higher and higher loads of alcohol in the blood.

The larger the person, the greater the amount required to attain a given concentration of alcohol. In a 150-pound man, alcohol is burned at about the rate of one drink per hour.

The typical drink—three-fourths ounce of alcohol—is provided by:

- a "shot" of spirits (1½ oz. of 50-percent alcohol— 100-proof whiskey or vodka),
- a glass of fortified wine (3½ oz. of 20-percent alcohol),
- a larger glass of table wine (5 oz. of 14-percent alcohol),
- a pint of beer (16 oz. of 4½ percent alcohol).

Drinking at the rate of one drink an hour will result in little, if any, accumulation of alcohol in the blood.

Even the first few sips of an alcoholic beverage, however, may cause changes in mood and behavior. These may be helped along by what the individual has learned to expect from previous drinking experiences.

Blood Alcohol and Behavior

The first consistent sizable changes in mood and behavior appear at blood alcohol levels of approximately 0.05 percent—that is 1 part alcohol to 2,000 parts blood. Thought, judgment, and restraint may be affected at this level which would result from a 150-pound man taking two drinks in succession. He feels carefree, released from many of his ordinary tensions and inhibitions—he loosens up. It is mainly to achieve this pleasant state that people drink in moderation.

As more alcohol enters the blood, the depressant or "short-circuiting" action of alcohol involves more functions of the brain. At a level of 0.10 percent (1 part to 1,000) voluntary motor actions—hand and arm movements, walking, sometimes speech—become plainly clumsy.

At 0.20 percent (1 part to 500), the controls by the entire motor area of the brain are measurably impaired; that part of the brain which guides emotional behavior is also affected. The person staggers or he may want

to lie down; he may be easily angered, or boisterous, or weep. He is "drunk."

At a concentration of 0.30 percent (1 part to 300), the deeper areas of the brain concerned with response to stimulus and understanding are dulled. At this level a person is confused, or may lapse into stupor. Although aware, he has poor understanding of what he hears or sees.

With 0.40 or 0.50 percent alcohol in the blood (1 part to 250 or 200), he is out of the world; he is in coma. Still higher levels of alcohol in the blood block the centers of the lower brain which control breathing and heart beat, and death comes.

This progression of effects is not unique to alcohol. It can be produced by other hypnotic-sedative drugs, such as barbiturates, ether, and chloral hydrate.

Blood-alcohol levels have important legal implications. In most States, an individual with a blood-alcohol level of 0.05 percent or less is legally presumed to be sober and in condition to drive a motor vehicle. A person with a level of 0.10 percent or 0.08 percent is legally presumed to be intoxicated or "under the influence" in some States, while in others the 0.15 percent level means legal impairment.

Chronic Heavy Drinking

Drinking large amounts of alcohol over long periods of time seems to change the sensitivity of the brain to the effects of alcohol. This means that larger amounts of alcohol are required to produce the same effects. This adaptation is called "tolerance." It shows up in the chronic use of all addictive drugs and is believed to be the basis of "addiction" or "dependence."

The effects of alcohol on the moderate or heavy drinker, and on the alcohol-dependent person, are different. Instead of the pleasant, relaxing effects usually experienced by the normal drinker, alcoholic persons may become progressively more tense and anxious while drinking.

The alcohol-dependent person shows extraordinary adaptation to alcohol. He must take relatively huge amounts to produce the changes in feelings and behavior which he previously attained with smaller quantities. Moreover, his capacity to drink very large quantities without losing control of his actions also marks him as different from the moderate or heavy drinker. Over some period of time the alcoholic person may drink a fifth of whiskey a day without showing signs of drunkenness. He may perform accurately complex tasks at blood alcohol levels several times as great as those that would incapacitate moderate to heavy drinkers. Later, in the chronic stage, tolerance decreases markedly until he may become drunk on relatively small amounts of alcohol.

At present, it is not known what accounts for the dramatic "behavioral tolerance" of the alcohol-dependent person to alcohol. It was once thought that "tolerance" came from differences in the rate of alcohol metabolism. It has been shown, however, that normal drinkers and

alcoholic persons do not differ much in their overall rate of alcohol metabolism. This argues that the adaptive changes must occur in the brain rather than in the liver.

Another way in which the moderate or heavy drinker differs from the alcoholic person is that the abrupt removal of alcohol can produce severe mental and bodily distress in the alcoholic person. Whereas the normal drinker may experience the passing misery of the "hangover," the alcohol-dependent person may have severe trembling, hallucinations, confusion, convulsions, and delirium—the alcohol withdrawal syndrome. The average person would have difficulty distinguishing between the common alcohol withdrawal syndrome involving the "shakes," sweating, nausea, and anxiety, and the more severe and potentially fatal condition known as delirium tremens. Both require immediate medical attention.

Effects of Alcohol on Sensation and Perception

Even low doses of alcohol reduce sensitivity to taste and odors. Alcohol has little effect on the sense of touch, but dulls sensitivity to pain.

Sharpness of vision seems relatively unaffected by alcohol. At high doses of alcohol, however, there is a decrease in ability to discriminate between lights of different intensities, and a narrowing of the visual field. The latter effect ("tunnel vision") may be particularly dangerous in automobile driving. Resistance to glare is impaired so that the eye requires longer to readjust after exposure to bright lights. Sensitivity to certain colors, especially red, appears to decrease.

In general, the senses are resistant to alcohol, but the changes that do occur are detrimental.

Effects of Alcohol on Motor Performance

Tests of muscular control or coordination show greater detrimental effects than on sensory capabilities. Intoxicating doses of alcohol impair most types of performance. A sensitive indicator of alcohol effect is the "standing steadiness" test. Alcohol increases swaying, especially if the eyes are closed. Coordination is also adversely affected by alcohol, as in tracing a moving object.

People differ in their susceptibility to the effects of alcohol on motor performance, especially at blood alcohol levels of 0.10 percent and below. Although sufficient alcohol impairs anyone's performance, anxious or determined people are better able to bring their performance up to its normal level.

Effects of Alcohol on Emotions

The direct action of alcohol on the body, coupled with its ability to relax feelings of self-criticism and inhibition, produce the "high" associated with alcohol use. This is found useful in social drinking situations as

people mingle, each recognizing that the others are also less responsible for what they do and say. It has been suggested that the way people behave when they are drunk is determined by what their social group makes of and teaches them concerning the state of drunkenness.

Some studies show that alcohol tends to decrease fear and increase likelihood that an individual will accept risks. For example, when a group of bus drivers were given several drinks, they were more likely to try to drive their buses through spaces that were too narrow—and seemingly more willing to risk failure—than when they were sober. The judgment and skill impairment was not predictable on the basis of amount consumed: some drivers were more affected by two whiskeys than others were by six.

Reaction time is measured by the rapidity with which a subject makes a simple movement, such as pressing a button in response to a sound or visual signal. Below a blood alcohol level of 0.07 percent, reaction time varies little. Between 0.08 and 0.10 percent, reaction time slows measurably. Higher levels consistently produce larger performance failures. A much greater effect of alcohol on reaction time is found when attention is divided, as when the subject is at the same time engaged in another task.

Other tests measuring both speed and accuracy suggest that alcohol has a greater effect on accuracy and consistency than on speed. A person who has had several drinks tends to "breeze through" a complex test but makes more errors than he normally would and is more erratic in his responses. Many subjects, however, feel their performance has improved and refuse to believe when shown the poor results.

Effects of Alcohol on Sexuality

Alcohol's capacity to release inhibitions is connected in the public mind with the observation that after drinking, some people tend to show an increased amorousness. This has given rise to an assumption that alcohol promotes or improves sexual activity.

Tests have revealed consistently that large doses of alcohol frustrate sexual performance. Studies of alcoholic persons have revealed that their sex life was disturbed, deficient, and ineffectual. Impotence may result, sometimes reversible with the return of sobriety.

It appears that in nonalcoholic persons, a few drinks dull the sense of restraint and, by helping to overcome lack of confidence or feelings of guilt about sex, facilitate sexual activity. A subtle truth, however, was expressed by Shakespeare: Drink "provokes the desire, but it takes away the performance."

Effects of Alcohol on Sleep

The effects of alcohol on sleep are known to anyone who has gone to bed after having had too much to drink, only to toss and turn and awaken the following morning feeling headachy and fatigued. Taking several

drinks before bedtime has been found to decrease the amount of REM (rapid eye movement) or dreaming sleep. The consequences of being deprived of REM sleep are impaired concentration and memory, as well as anxiety, tiredness, and irritability.

Mixing Other Drugs and Alcohol

In recent years, hundreds of new drugs have been introduced to the public. They include drugs for inducing sleep, tranquilization, sedation, and for relief of pain, motion sickness, or head cold and allergy symptoms. Too numerous to name, they include narcotics, barbiturates and other hypnotic-sedative drugs, tranquilizers, antihistamines, and volatile solvents. Some of these drugs act on the same brain areas as alcohol does.

When used simultaneously with alcohol, these drugs can grossly exaggerate the usual responses expected from alcohol or from the drug alone. This is due to the additive or combined effects exerted by alcohol and the other drugs on the central nervous system. For example, alcohol and barbiturates when combined multiply each other's effects. Taking both drugs in close order can be particularly dangerous and may result in death. The use of any drug that has a depressant effect on the central nervous system in combination with alcohol represents an extra hazard to health and safety and, in some cases, to life itself.

Sobering Up

The speed of alcohol absorption affects the rate at which one becomes drunk; in reverse, the speed of alcohol metabolism affects the rate at which one becomes sober again. Once in the bloodstream and carried throughout the body, alcohol undergoes metabolic changes and eventually is reduced to carbon dioxide and water. Most of these processes take place in the liver, although from 2 to 5 percent of the alcohol is excreted chemically unchanged in urine, breath, and sweat.

As a general rule, it will take as many hours as the number of drinks consumed to sober up completely. Drinking black coffee, taking a cold shower, or breathing pure oxygen will not hasten the process.

Search for some method to speed up the rate of alcohol metabolism, and thus provide quick sobriety, has been unsuccessful. All one can do is wait, and let the liver do its work.

A familiar after-effect of overindulgence is the hangover—the morning-after misery of fatigue, nausea, upset stomach, anxiety, and headache. The hangover is common and unpleasant, but rarely dangerous. Although the hangover has been blamed on mixing drinks, it can be produced by any alcoholic beverage, or by pure alcohol. The exact cause is unknown.

There is no scientific evidence to support the curative claims of popular hangover remedies such as coffee, raw egg, oysters, chili pepper, steak sauce, "alkalizers," vitamins, "the hair of the dog," or such drugs as

barbiturates, amphetamines, or insulin. Doctors usually prescribe aspirin, bed rest, and solid food as soon as possible.

Hangovers can be prevented by drinking slowly, with food in the stomach, under relaxed social circumstances, with sufficient self-discipline to avoid drunkenness.

What Determines Drinking Behavior?

As suggested above, the rate at which alcohol is absorbed into the bloodstream and its effects on behavior are influenced by several interacting factors.

On the physical side, a person's weight, how fast he drinks, whether he has eaten, his drinking history and body chemistry, and the kind of beverage (and mixer) used are all influential.

On the psychological side, the drinking situation, the drinker's mood, his attitudes, and his previous experience with alcohol will all contribute to his reactions to drinking.

1. **Speed of drinking.** The more rapidly an alcoholic beverage is swallowed, the higher will be the peak blood-alcohol level.
2. **Body weight.** The greater the weight of the body muscle (but not body fat) the lower will be the blood-alcohol concentration from a given amount of alcohol.
3. **Presence of food in the stomach.** Eating while drinking retards the absorption of alcohol, especially in the form of spirits or wine. If alcohol is taken with a substantial meal, peak blood-alcohol concentrations may be reduced by as much as 50 percent.
4. **Drinking history and body chemistry.** Individuals with a long history of drinking develop "tolerance" and require far more alcohol to get "high" than an inexperienced drinker. Each person has an individual pattern of physiological functioning which may affect his reactions to alcohol. For example, in some conditions, such as that marked by the "dumping syndrome," the stomach empties more rapidly than is normal, and alcohol seems to be absorbed more quickly. The emptying time may be either slowed or speeded by anger, fear, stress, nausea, and the condition of the stomach tissues.
5. **Type of beverage.** In all the major alcoholic beverages—beer, table wines, cocktail or dessert wines, liqueurs or cordials, and distilled spirits—the significant ingredient is identical: alcohol. In addition, these beverages contain other chemical constituents. Some come from the original grains, grapes, and other fruits. Others are produced during the chemical processes of fermentation, distillation, or storage. Some are added as flavoring or coloring. These nonalcoholic "congeners" contribute to the effects of certain beverages, either directly affecting the body, or affecting the rates at which alcohol is absorbed into the blood and oxidized.

Diluting an alcoholic beverage with another liquid, such as water, helps to slow absorption, but mixing with carbonated mixers can increase the absorption rate.

LONG-TERM EFFECTS

Drinking alcohol in moderation apparently does the body little permanent harm. But when taken in large doses over long periods of time, alcohol can prove disastrous, reducing both the quality and length of life. Damage to the heart, brain, liver, and other major organs may result.

Prolonged heavy drinking has long been known to be connected with various types of muscle diseases and tremors. One essential muscle affected by alcohol is the heart. Some recent research suggests that alcohol may be toxic to the heart, and to the lungs as well.

Liver damage especially may result from heavy drinking. Cirrhosis of the liver occurs about eight times as often among alcoholic individuals as among nonalcoholics. Yet it also occurs among nondrinkers, and its cause is still sought. Malnutrition has been blamed. Some investigations, however, have shown that very large amounts of alcohol may cause liver damage even in properly fed subjects.

When large quantities of alcohol are consumed, the gastrointestinal system can become irritated. Nausea, vomiting, and diarrhea are mild indications of trouble. Gastritis, ulcers, and pancreatitis often occur among alcoholic persons.

Heavy drinkers have long been known to have lowered resistance to pneumonia and other infectious diseases. Malnutrition is usually considered to be the cause. Recent research has shown, however, that lowered resistance may also occur in well-nourished heavy drinkers, and appears to result from a direct interference with immunity mechanisms. With blood-alcohol levels of 0.15 to 0.25 percent, the reduction of white blood cell mobilization was as great as that found in states of severe shock.

Heavy drinking over many years may result in serious mental disorders or permanent, irreversible damage to the brain or peripheral nervous system. Mental functions such as memory, judgment, and learning ability can deteriorate severely, and an individual's personality structure and grasp on reality may disintegrate as well.

III

PROBLEM DRINKING AND ALCOHOLISM: The Nature and Scope of the Challenge

A nationwide survey of American drinking practices showed that more than two-thirds of adults drink alcoholic beverages at least occasionally. Adding younger drinkers to this population gives about 100 million people who drink. The overwhelming majority of those who drink do so responsibly. But what of the others, far too many, whose drinking gets out of hand, endangering themselves and those around them?

WHAT ARE PROBLEM DRINKING AND ALCOHOLISM?

Distinctions are sometimes made between people with drinking problems and those suffering from alcoholism—alcoholic persons being considered the more uncontrolled and injured group. However, in practice the two are often hard to distinguish, except in extreme cases of alcoholism; hence, hard and fast labeling is seldom done.

Within our society, problem drinking is usually recognized whenever anyone drinks to such an excess that he loses ability to control his actions and maintain a socially acceptable life adjustment. One authority describes a problem drinker as:

1. Anyone who must drink in order to function or "cope with life."
2. Anyone who by his own personal definition, or that of his family and friends, frequently drinks to a state of intoxication.
3. Anyone who goes to work intoxicated.
4. Anyone who is intoxicated and drives a car.
5. Anyone who sustains bodily injury requiring medical attention as a consequence of an intoxicated state.
6. Anyone who, under the influence of alcohol, does something he contends he would never do without alcohol.

Other "warning signs" that often indicate problem drinking are: the need to drink before facing certain situations, frequent drinking sprees, a steady increase in intake, solitary drinking, early morning drinking, and

the occurrence of "blackouts." For a heavy drinker, a blackout is not "passing out" but a period of time in which he walks, talks, and acts, but does not remember. Such blackouts may be one of the early signs of the more serious form of alcoholism.

Definitions of Alcoholism

At present there is no definition of alcoholism that satisfies all. The following one is widely accepted:

> Alcoholism is a chronic disease, or disorder of behavior, characterized by the repeated drinking of alcoholic beverages to an extent that exceeds customary dietary use or ordinary compliance with the social drinking customs of the community, and which interferes with the drinker's health, interpersonal relations, or economic functioning. (Mark Keller in *Ann. Am. Acad. Polit. Soc. Sc.*, 315:1, 1958.)

Another is based on measures of behavior: (1) loss of control—the victim finds himself drinking when he intends not to drink, or drinking more than he planned; (2) presence of functional or structural damage—physiological, psychological, domestic, economic, or social; (3) use of alcohol as a kind of universal therapy, as a psychopharmacological substance through which the person tries to keep his life from coming apart.

Most definitions refer only to destructive dependency on alcohol. One definition which suggests the origins of alcoholism is that of Drs. Morris Chafetz and H. W. Demone, Jr.

> We define alcoholism as a chronic behavioral disorder which is manifested by undue preoccupation with alcohol to the detriment of physical and mental health, by a loss of control when drinking has begun (although it may not be carried to the point of intoxication) and by a self-destructive attitude in dealing with personal relationships and life situations. Alcoholism, we believe, is the result of disturbance and deprivation in early infantile experience and the related alterations in basic physiochemical responsiveness; the identification by the alcoholic with significant figures who deal with life problems through the excessive use of alcohol; and a sociocultural milieu which causes ambivalence, conflict, and guilt in the use of alcohol. (*American Handbook of Psychiatry*. Forthcoming.)

Whatever the definition used, it is generally agreed that there are about 9 million people in the United States with drinking and alcoholism problems.

Who and Where Are the Alcoholic Men and Women?

To many people, the notion of an alcoholic person means the skid row derelict. Yet investigation shows that the alcoholic men of skid row make up less than 5 percent of problem and alcoholic drinkers.

Most of the problem drinkers are employed or employable, family-

centered people. More than 70 percent of them live in respectable neighborhoods, with their husbands and wives, send their children to school, belong to clubs, attend church, pay taxes, and continue to perform more or less effectively as businessmen, executives, housewives, farmers, salesmen, industrial workers, clerical workers, teachers, clergymen, and physicians.

Estimates vary, but it appears that about 80 percent of alcoholic individuals are men, and 20 percent are women. The proportion of women has been rising in recent years, perhaps due to a growing willingness of such women to seek treatment. They may therefore now be more visible rather than more numerous.

A survey found the percentage of problem drinkers was highest in the western States, and among males, residents of the larger cities, the divorced or unmarried, those with the least and those with the most education, and those with the lowest and highest job status.

IRRESPONSIBLE DRINKING

The Personal Price

If one considers only the personal cost of drinking problems, the price is high. The life expectancy of alcoholic drinkers is shorter by 10 to 12 years than that of the general public. The mortality rate is at least two and one-half times greater, and they suffer more than their share of violent deaths. Alcoholism appears as a cause of death on more than 13,000 death certificates yearly. Undoubtedly, alcohol and its abuse contribute to many deaths which are attributed to other causes.

Effects of alcoholism are not limited to the drinker alone. His family, his employer, and society at large are all harmed by his behavior, and all have a stake in helping to prevent the disease from becoming more severe. If one considers the ill effects of drinking problems on just the families of problem drinkers, at least 36 million Americans can be regarded as caught in the web of alcohol abuse. Unhappy marriages, broken homes, desertion, divorce, impoverished families, and deprived or displaced children are all parts of the toll. The cost to public and private helping agencies for support of families disabled by alcohol problems amounts to many millions of dollars a year.

The Drinking Driver

Public shock over the thousands of deaths and hundreds of thousands of disabling injuries caused annually by drinking drivers has been a major reason for the current concern about alcohol abuse.

Highway deaths have been rising steadily until nearly 60,000 Americans are now killed yearly. It has been shown that alcohol is involved in half of the highway fatalities. Drivers with chronic drinking problems are responsible for about two-thirds of the alcohol-related deaths.

Young drivers and social drinkers with a high blood-alcohol level at the time of the accident cause the remaining one-third. These figures say nothing about the 500,000 people who are injured, and possibly disabled, nor do they cover the immense costs in property damage, wage losses, medical expenses, and insurance costs.

Not only are alcohol-impaired drivers the cause of accidents; drunken pedestrians also contribute to the toll. A California study showed that 62 percent of the drivers and 40 percent of the pedestrians in fatal accidents had been drinking, and 53 percent of the drivers and 32 percent of the pedestrians had blood-alcohol levels above 0.10 percent.

Efforts to reduce driving while under the influence of alcohol include improved public education programs; uniform State laws to give police the right to test blood-alcohol levels of any suspected driver; reduction of the legal criterion of intoxication to 0.10 percent or lower; and improved traffic law enforcement.

Alcohol and Crime

For some drinkers, alcohol releases violent behavior that might be unlikely or even unthinkable in their sober state. Half of all homicides and one-third of all suicides are alcohol-related—accounting for about 11,700 deaths yearly. Alcohol is also frequently involved in assaults and offenses against children. A California study of more than 2,000 felons concluded that "problem drinkers were more likely to get in trouble with the law because of their behavior while drinking or because they needed money to continue drinking."

Alcohol figures in less violent criminal behavior as well. For example, almost half of the 5½ million arrests yearly in the United States are related to the misuse of alcohol. Drunkenness accounts for approximately 1,400,000 arrests, while disorderly conduct and vagrancy—used by many communities instead of the public drunkenness charge—account for 665,000 more. Intoxicated drivers make up the 335,000 remaining arrests. Cost to taxpayers for the arrest, trial, and keeping in jail of these persons has been estimated at more than $100 million a year.

The arrests include only a portion of a community's excessive drinkers; many are skid row people who are arrested, jailed, released, and arrested again, time after time. This is the so-called "revolving door" procedure found in most communities.

Led by the National Institute on Alcohol Abuse and Alcoholism, efforts are underway to find better ways of handling the chronic drunkenness offender than through the criminal justice system. The National Conference of Commissioners on Uniform State Laws has developed a "Uniform Alcoholism and Intoxication Treatment Act." Adoption of the Act would make it State policy that alcoholic and intoxicated persons may not be subjected to criminal prosecution, but must be provided appropriate treatment for their alcohol problems.

The Cost to Industry

More than half of the Nation's alcoholics are employed. Employees with drinking problems are absent from work about 2½ times as frequently as the general work force. Their drinking may result in friction with co-workers, lowered morale, bad executive decisions, and poor customer and public relations for their employers. No doubt, drinking problems result in the loss of trained employees—particularly those experienced workers in their middle years with lengthy service—among the most valuable assets of any firm.

A loss of nearly $10 billion yearly has been attributed to worktime lost through alcohol problems of employees in business, industry, civilians in government, and the military.

The Cost to the Nation

The private act of drinking, when carried to excess, has consequences which affect and harm many others. Ultimately, society as a whole pays a high price. An economic cost to the Nation of $25 billion per year has been attributed to problem drinking and alcoholism. This includes the $10 billion mentioned above in lost work time, as well as $9 billion in costs for health and welfare services provided for alcoholic persons and their families, and a cost of nearly $6.5 billion as a result of motor vehicle accidents.

The human cost cannot be measured.

IV

THE ORIGINS OF ALCOHOLISM: Physiological, Psychological, and Sociological Factors

For a long time, people with drinking problems were lumped together under the label "alcoholic." All were assumed to have the same illness. The search was for *the* cause of alcoholism.

As more was learned, it became clear that there are many kinds of drinking problems, many types of people who have them, and many reasons why they begin and continue to drink too much.

The search for a single cause of alcoholism has widened to include physiological, psychological, and sociological factors that might, singly or in combination, explain problem drinking by various types of individuals.

The Cooperative Commission on the Study of Alcoholism reported:

> An individual who (1) responds to beverage alcohol in a certain way, perhaps physiologically determined, by experiencing intense relief and relaxation, and who (2) has certain personality characteristics, such as difficulty in dealing with and overcoming depression, frustration, and anxiety, and who (3) is a member of a culture in which there is both pressure to drink and culturally induced guilt and confusion regarding what kinds of drinking behavior are appropriate, is more likely to develop trouble than most other persons. An intermingling of certain factors may be necessary for the development of problem drinking, and the relative importance of the different causal factors no doubt varies from one individual to another.

PHYSIOLOGICAL FACTORS

To date, neither chemicals in specific beverages nor physiological, nutritional, metabolic, nor genetic defects have been found which would explain alcoholism.

Alcoholism occurs frequently in children of alcoholic persons which suggests a hereditary basis. Yet it also occurs in the children of devout abstainers. And an early study showed that children of alcoholic parents placed in foster homes before the age of 10 were no more likely to become alcoholic individuals than children of nonalcoholic parents.

Vitamin or hormone deficiencies have been suggested as causes of alcoholism. Most of such deficiencies seen in individuals with advanced alcoholism appear to be results, rather than causes of excessive drinking.

There is no proof that alcoholic persons are generally allergic to alcohol itself or to other nonalcoholic components of alcoholic beverages.

Although it is frequently said that alcoholic individuals are unable to metabolize or eliminate alcohol as rapidly as normal individuals, research indicates that many actually metabolize it about 10 to 20 percent more rapidly when they are drinking heavily.

Interest in the physiological basis of alcohol dependence has grown in recent years. The current state of knowledge has been summed up:

> The nature of the addictive process, the developmental sequence of events and the central nervous system alterations which define the condition of alcohol addiction are unknown. Beyond the obvious requirement of ingestion of sufficient quantities of alcohol over a long enough period of time, the determinants of alcohol tolerance and dependence remain a matter of conjecture. The development of approaches to these very basic questions constitutes perhaps the major challenge to the biological scientist concerned with addiction.

PSYCHOLOGICAL FACTORS

Psychologists and psychiatrists have described alcoholic persons as neurotic, maladjusted, unable to relate effectively to others, sexually and emotionally immature, isolated, dependent, unable to withstand frustration or tension, poorly integrated, and marked by deep feelings of sinfulness and unworthiness. Some suggest that alcoholism is an attempt at a self-cure of an inner conflict, and might be called "suicide by ounces." There are no reliable studies to confirm these observations.

Many researchers have gathered data showing that alcoholic individuals often come from broken or unhappy homes, and have undergone serious emotional deprivation during their childhood. But many nonalcoholic men and women have these backgrounds and personality qualities. Some of the latter may suffer from a variety of mental illnesses; others lead reasonably normal lives.

If there is such a thing as an "alcoholic personality"—or a "prealcoholic personality"—its specifications are loosely defined and often contradictory.

SOCIOLOGICAL FACTORS

One of the most promising studies of the causes of alcoholism has been the comparison of drinking practices and alcohol problems with different cultures and societies. This is aimed at finding why alcoholism is widespread in some national, religious, and cultural groups but rare in others.

Groups with highest rates of alcoholism classed as "high incidence" groups include the northern French, the Americans—especially the Irish-American and Alaskan Indians, the Swedes, Swiss, Poles, and the northern Russians. Relatively low-incidence groups include the Italians, some Chinese groups, Jews, Greeks, Portuguese, Spaniards, and the southern French.

Differences between some of these cultures are seen within the United States. In one survey of problem drinkers in New York City (when the total population was about 10 percent Irish, 15 percent Italian, and 25 percent Jewish), 40 percent of the alcoholic persons were Irish, 1 percent Italian, and none Jewish. In a California study, in an area with large proportions of Irish, Italians, and Jewish residents, 21 percent of the alcoholic persons were Irish, 2 percent Italian, and 0.6 percent Jewish.

The low rates of alcoholism seen in some groups cannot be attributed to abstinence. Most Mormons and Moslems, for example, do not drink because of religious beliefs, and their alcoholism rates are low. But among the Italians, Greeks, Chinese, and Jews, a large percentage of the population drinks, and many use alcohol abundantly, yet their alcoholism rates are low, too. The per capita consumption of alcohol in Italy is second only to top-ranked France, but alcoholism rates among Italians are relatively low.

Drinking Customs Are Important

One authority suggests that the rate of alcoholism is low in those groups in which the drinking customs, values, and sanctions are well established, known to and agreed upon by all, and consistent with the rest of the culture. By contrast, groups with mixed feelings about alcohol (such as the Anglo-Saxon Protestant group in America)—with no agreed-upon ground rules—tend to have high alcoholism rates.

This has been found among the few Mormons who do drink, among drinkers who feel forced to overindulge to prove their "manliness," and especially among children of parents with conflicting attitudes—such as a father who accepts drinking and a mother who feels drinking is a sin.

In general, research has shown that among groups that use alcohol freely, the lowest incidence of alcoholism comes with certain habits and attitudes:

1. The children are exposed to alcohol early in life, within a strong family or religious group. Whatever the beverage, it is served in diluted and small quantities, with consequent low blood-alcohol levels.

2. The beverages commonly although not invariably used are those containing relatively large amounts of nonalcoholic components (wines and beers), which also give low blood-alcohol levels.
3. The beverage is considered mainly as a food and is usually consumed with meals, again with consequent low blood-alcohol levels.
4. Parents present a constant example of moderate drinking.
5. No moral importance is attached to drinking. It is considered neither a virtue nor a sin.
6. Drinking is not viewed as proof of adulthood or virility.
7. Abstinence is socially acceptable. It is no more rude or ungracious to decline a drink than to decline a piece of cake.
8. Excessive drinking or intoxication is not socially acceptable. It is not considered stylish, comic, or tolerable.
9. Alcohol is not a prime focus for an activity.
10. Finally, and perhaps most importantly, there is wide and usually complete agreement among members of the group on the "ground rules" of drinking.

V

OVERCOMING ALCOHOLISM:
Diagnosis and Treatment

Alcoholism is a treatable illness from which as many as two-thirds of its victims can recover. Yet there persists a number of myths and misunderstandings that make it difficult for alcoholic persons to seek and get the help they need.

We still think of alcoholism as a form of moral weakness, rather than an illness—a stigma which causes problem drinkers and their families to hide their "sins" rather than tell of their problems and seek treatment.

In addition, many people, laymen and medical personnel alike, still consider alcoholism to be untreatable, and regard the person with alcohol problems as unmanageable and unwilling to be helped. None of these assumptions is true.

THE CHANCES OF RECOVERY

About 70 percent of alcoholic people are men and women who are still married and living with their families, still holding a job—often an important one—and still are accepted and reasonably respected members of their communities. For those of this group who seek treatment, the outlook is optimistic. It is quite possible for a person with drinking problems to learn to abstain completely, or to control his drinking most of the time.

The Rehabilitation Approach

Recently, some therapists have been using a different basis for measurement of treatment outcome—rehabilitation. Success is considered achieved when the patient maintains or reestablishes a good family life and work record, and a respectable position in the community. Relapses may occur but do not mean that the problem drinker or the treatment effort has failed. A successful outcome can be expected in at least 60 percent, and some therapists have reported success in 70 to 80 percent of

their cases. This depends on the personal characteristics of the patient; the competence of the therapist; the availability of treatment facilities; and the strong support of family, employer, and community.

"It is doubtful that any specific percentage figure has much meaning in itself," says Dr. Selden Bacon, director of the Center of Alcohol Studies at Rutgers University. "What has a great deal of meaning is the fact that tens of thousands of such cases have shown striking improvement over many years."

For the remaining part of the alcoholic population—the skid row alcoholics and the 10 percent who are psychotic alcoholics, usually in State mental hospitals—the prognosis is less optimistic. Less than 10 to 12 percent can achieve full recovery.

Treatment Adapted to Patient

There is no evidence that any particular type of therapist—physician, clergyman, Alcoholics Anonymous member, psychiatrist, psychologist, or social worker—will have better results than another. The chances of a successful outcome apparently depend more on the combination of right patient and right treatment. Different patients respond to different treatments. The earlier treatment is begun, the better are the prospects for success, although many have been treated successfully after many years of excessive drinking.

DIAGNOSING ALCOHOLISM

Alcohol problems are often slow to be recognized by those who could treat them. Thus, the diagnosis of alcoholism is often made only when the illness is in its advanced stages—when the victim is unable to control his drinking, may no longer have an established family life or be able to hold a job, or when malnutrition or organic damage is already present.

Members of the medical profession now realize that since alcoholic individuals rarely admit, even to themselves, that they have drinking problems, their family physicians must make special efforts to discover the illness in its early stages.

Diagnosing the Alcoholic Person

Unfortunately, there is no simple diagnostic procedure for detecting alcoholism. Some of the factors involved in diagnosing an alcoholic person include:

1. **The quantity of alcohol consumed.** But quantity alone is an insufficient measure.
2. **The rate of consumption.** One pint of distilled spirits consumed during a 10-hour period causes different behavior than a pint consumed in 1 hour. Drunkenness depends on rate of consumption as well as quantity.

3. **Frequency of drinking episodes.** One who gets drunk three or four times a year is less liable to be labeled alcoholic than someone who gets drunk every week. Frequency of drunkenness is one factor indicating alcoholism.
4. **The effect of drunkenness upon self and others.** A man who commits deviant sex acts or beats his wife while drunk is more likely to be labeled alcoholic than a man who quietly gets drunk and leaves others alone. That is, the effect of drunkenness on others, and the reaction of others to the drunkenness, determines if and how the individual is labeled alcoholic.
5. **Visibility to labeling agents.** The police, the courts, school personnel, welfare workers, employers and, in some situations, family, friends, and helping agents—psychiatrists, physicians, lawyers—are the key sources of alcoholic labeling.
6. **The social situation of the person.** There are different standards set by each class and status group in our society. How one does or does not conform to the standards of one's own group will determine whether a person will be labeled an alcoholic and, therefore, be reacted to as an alcoholic.

Help in sorting out particular characteristics of alcoholic persons can usually be obtained from one or more of the following: the family physician, clergyman, Alcoholics Anonymous, Al-Anon Family Group, alcoholism clinic or alcoholism information and referral center, public health nurse, social worker, community mental health center, Veterans Administration or general hospital, health, welfare, or family service agency, some employers and labor unions, and local affiliates of the National Council on Alcoholism.

TREATING ALCOHOLISM

There are generally three steps in the treatment of alcoholism, although all persons may not need to take all three:

1. Managing acute episodes of intoxication to save life and overcome the immediate effects of excess alcohol.
2. Correcting the chronic health problems associated with alcoholism.
3. Changing the long-term behavior of alcoholic individuals so that destructive drinking patterns are not continued.

There are many different types of drinking problems and numerous kinds of treatment techniques available. The challenge is to identify the needs of the individual and to match them with the most appropriate therapy.

The Treatment Environment

An individual may begin treatment during a spell of temporary sobriety,

during a severe hangover, or during acute intoxication. For many it will be during the drying-out or withdrawal stage.

An acutely ill alcoholic person, or the nonalcoholic individual who is acutely intoxicated, should be given care under medical supervision. A general hospital ward is considered best for preliminary treatment. A few general hospitals have long offered such care, but the majority are still reluctant to accept alcoholic men and women as patients.

The position of most hospital officials has been attributed to hostile feelings evoked by the so-called "typical alcoholic patient," who at admission is often disheveled, disturbing, and demanding.

A favored patient might be admitted but only if he or she paid for a private room and 24-hour private nursing care. Other patients, unable to afford such care, may be sent to the "drunk tank" of the local jail, the psychiatric ward of a State hospital, or the emergency ward of a local hospital. Most emergency wards are concerned primarily with sobering the patient, treating obvious wounds, and discharging him as quickly as possible.

Changing Hospital Attitudes

San Francisco's Mount Zion hospital proved this technique was outmoded when they decided to accept alcoholic men and women simply as sick people needing hospital care. These patients were placed in open wards and treated by physicians, nurses, and other personnel who had been trained in the use of new drugs and were ready to treat them as patients who were ill. It quickly became evident that other patients were not disturbed, hospital routines were not upset, and most of the alcoholic persons were willing to undertake followup therapy.

A study at Massachusetts General Hospital has shown that many people with drinking problems who appear unwilling to accept treatment on a long-term basis will indeed follow through in treatment if they are met from arrival in the emergency ward with understanding, sympathy, and attention.

Although the successes at Mount Zion and Massachusetts General have been repeated at other hospitals, and leaders of the American Medical Association and the American Hospital Association have urged hospitals throughout the country to follow this lead, many are still unwilling to accept alcoholic people as ordinary patients. Change, where it comes, usually is in response to demands from the community.

PHYSIOLOGICAL TREATMENT

In practice, there are six physiological conditions which must be recognized and treated if an alcoholic patient is to get appropriate care. These include: (1) acute alcohol intoxication or severe drunkenness, (2) alcohol withdrawal symptoms short of delirium tremens, (3) delirium tremens itself, (4) diseases often associated with alcoholism, such as

cirrhosis and polyneuropathy, (5) neurological and psychiatric conditions such as alcoholic encephalopathies, and (6) the long-term problem of addiction or dependency.

Tranquilizers are often used in the treatment of acute intoxication. These have been effective in reducing the trembling, anxiety, sleeplessness, nausea, and general discomfort which occur when an alcoholic person stops drinking. Among the tranquilizers used are chlorpromazine, promazine hydrochloride, and chlordiazepoxide. The latter drug has been found safe and often effective in preventing delirium tremens and convulsions during withdrawal.

Delirium Tremens

Delirium tremens (DT's) is a serious and sometimes fatal condition, in which the patients are confused, trembling, feverish, and sometimes convulsive. They have terrifying hallucinations. About 5 percent of alcoholic people in hospitals, and perhaps 20 to 25 percent who suffer the DT's alone and unattended, die as a result. Tranquilizers, intensive nursing care, control of the food intake and fluid electrolyte balance, are important treatment aids.

It appears that delirium tremens is not simply a direct toxic effect of alcohol on the brain. In fact, it usually occurs after withdrawal—in persons who have stayed drunk for many days or weeks.

New Medical Findings

Recent research has helped in medical management of acute intoxication and withdrawal. For example, it was observed that some alcoholic people brought to the hospital in a state of coma may not have high blood-alcohol levels but do have low blood-sugar levels. Apparently, a large dose of alcohol taken after fasting 24 hours or more can produce a rapid drop in blood-sugar and, in fact, can cause hypoglycemic coma similar to that produced by an overdose of insulin.

Research has also shown that, contrary to long-held opinion, patients during withdrawal are not always dehydrated, and do not necessarily require intravenous fluids. In fact, overhydration may be the problem, because alcoholic drinkers often consume large amounts of other liquids while on a binge.

The Tranquilizer "Bridge"

Once over the acute stages of intoxication or withdrawal, the alcoholic patient starting long-range treatment may require a kind of drug "bridge" over the difficult early days or weeks.

Physicians commonly prescribe minor tranquilizers, such as meprobamate, to produce relaxation and to reduce the tensions which many alcoholic persons believe to have triggered their drinking bouts. Patients

are cautioned to beware of switching dependence from alcohol to tranquilizers.

Aversion and Deterrent Agents

Other physicians use "aversion" therapy—administering an alcoholic beverage and at the same time a powerful nausea-producing agent like emetin or apomorphine. Repeated treatments are intended to develop a conditioned reflex loathing for alcohol in any form.

More widely known and used are the so-called "deterrent agents" such as disulfiram (Antabuse). A patient regularly taking disulfiram finds that if he drinks any alcohol, a pounding headache, flushing, nausea, and other unpleasant symptoms will result.

Physicians screen patients carefully to decide which treatment is most appropriate for a given individual. The "aversion" methods of treatment require close medical supervision and informed consent of the patient.

PSYCHOLOGICAL AND SOCIAL THERAPY

Drug therapy can provide important, although temporary, relief for many patients. However, for most patients, it can help only as the introduction to treatment which attempts to get at the factors underlying the alcoholic person's drinking.

Psychotherapy Helps Many

Experience has shown that long-lasting results can be achieved for many patients primarily through psychotherapy. Psychotherapy covers various kinds of self-examination, counseling, and guidance. A trained professional works with—rather than on—patients, alone or in groups, to help them change their feelings, attitudes, and behavior toward more rewarding patterns of living.

The psychotherapeutic approach usually starts out with gaining acceptance—by the patient himself and, perhaps, his family—of the alcoholic person as one who is sick but not evil, immoral, or weak. And there must be genuine acceptance by the patient of the idea that he needs help. Once this is done, the therapist attempts to understand some of the patient's underlying tensions as well as his more troublesome life problems. He tries to solve those problems that can be readily handled, and to find a means—other than drinking—which will enable the patient to live with those problems that cannot be solved.

Preaching Doesn't Work

Most successful therapists say that pleading, exhortations, telling the patient how to live his life, or urging him to use more willpower, are

usually useless and may be destructive. They stress the need for creating a warm, concerned relationship with the patient.

Psychotherapy for alcoholic patients differs somewhat from that used with other patients. It tends to be directed more to action, focusing on the immediate life situation of the patient and his or her drinking problem. Many therapists bring members of the patient's family into the therapy program. Research has shown that the family may include another member, perhaps more emotionally disturbed than the patient, who may be partly responsible for the alcoholic person's drinking.

How Long in Treatment?

Usually patients find that sobering up means they must face a backlog of personal, family, financial, and social problems. They may need help to work out these problems. Many therapists argue that treatment cannot be conducted on a hit-or-miss, intermittent basis, or restricted to straightening out occasional drinking episodes. They suggest frequent sessions during the first weeks or months, and then sessions at longer intervals as the patient progresses.

On the other hand, doctors at the Cleveland Center on Alcoholism claimed after 5 years of experience with nearly 2,000 patients that a substantial portion could be given significant help in from one to five therapeutic sessions. Not advocated for all, this short-term therapy was found to be most effective with those with good family ties and a determination to get well, who could with help face their situation quickly.

Some therapists claim that individual treatment on a one-to-one basis is the most successful. Others prefer group therapy, especially when a group of patients is treated simultaneously by a team of therapists.

VOLUNTARY HELPERS

The discussion of treatment resources has so far centered on the role of the medical and allied professions in helping the alcoholic person. Yet there are many organizations and agencies, staffed largely by nonmedical personnel, which provide help to countless thousands of alcoholic persons, and aid them in reestablishing better relations with their families, employers, and community.

Alcoholics Anonymous

One of the major voluntary helpers is the fellowship of Alcoholics Anonymous. AA is described as a loosely knit, voluntary fellowship of alcoholic individuals gathered together for the sole purpose of helping themselves and each other to get sober and stay sober. It has also been pictured as serving its members first as a way back to life, and then as a way of living. It has about 425,000 members in about 13,000 groups in

the United States. There are in excess of 800,000 alcoholic men and women participating in 25,000 AA groups all over the world. However, despite its scope, even AA reaches only a limited number of those who need help, when the approximately 9 million alcoholic and problem drinkers in our country are considered.

Important to the AA approach is an admission by the alcoholic person of his lack of power over alcohol. He finds his life unmanageable and his situation intolerable. For some, this realization may come when they have lost everything and everyone. For others, it may occur when they are first arrested by the police, or warned by their employer. At this point, "the individual must decide to turn over his life and his will to a power greater than his own." Much of the program has a spiritual, but nonsectarian basis.

During the early years of AA, some members insisted that "only an alcoholic can understand an alcoholic," and there was little cooperation between AA workers and physicians, clergymen, and social workers. As they have come to know one another better, most AA members no longer hold this view, and cooperation with professional therapists has been increasing. Conversely, professionals strongly encourage membership in AA as part of the treatment programs for alcoholic people in detoxification centers, general and psychiatric hospitals, clinics, and prisons.

Al-Anon and Alateen Serve Families

Other organizations stimulated by the example of Alcoholics Anonymous have been effective in involving family members and helping them. Al-Anon, an organization of spouses and other relatives of alcoholic patients, is available whether or not the alcoholic family member is in AA or part of some other rehabilitation procedure. The value of membership is to learn that one is not alone in this predicament and to take advantage of others' trial-and-error attempts at better adjustment. Alateen is a parallel organization for the teenage children of an alcoholic parent. These organizations are listed in most telephone directories.

Many professionals emphasize that, valuable and widely accessible as it is, AA should not be considered as a complete form of treatment for all alcoholic individuals; rather, it should be viewed for many as a support to and not a substitute for various forms of therapy.

Other Helping Hands

Clergymen are taking an increasingly active role in the treatment of alcoholic individuals. Traditionally, addictive drinking was considered a sin, and its treatment, therefore, a responsibility of the clergy.

The original goal of moral reform has now changed considerably. After deep reappraisal, many clergymen of various faiths have taken a new approach, based on modern psychological and psychiatric knowledge; with alcoholic people, they are following the pattern of pastoral counsel-

ing provided generally for people in trouble. They are also becoming valued members of therapeutic teams administering group therapy.

Vocational rehabilitation workers, public welfare caseworkers, visiting nurses, and probation and parole officers have also been trained to help alcoholic persons. This is especially true of personnel managers in industry, who are often the first to detect the heavy drinking of employees and to start them on the way to treatment.

Help for alcoholic men and women and their families is provided by many other agencies and workers, both governmental and private. Some of these are discussed in the section, The Helping Network.

VI

PREVENTING ALCOHOL PROBLEMS AND ALCOHOLISM

Preventing problem drinking and alcoholism has become a national health goal. Reaching it will depend in the long run on the private decisions and behavior of every citizen.

We have tried legal prohibition of alcohol and have rejected it. Some States are still experimenting with controlled sale of alcoholic beverages, and minors are denied the legal right to buy them. Yet such legal controls are found to have little effect on actual use and abuse of alcohol.

Legal Controls Ineffective

A State of New York study found no consistent relationship between excessive drinking—as measured by drunken-driving and public intoxication arrests, admissions to mental hospitals, or statistics on alcoholism rates—and sales through State monopoly or private liquor stores. Nor was there a link between excessive drinking and the number of liquor stores in a given area. The conclusion was that the various legal control systems used in the United States bore no relationship to the extent or nature of alcohol use, or alcohol problems.

As for minimum age laws, which make it illegal to sell alcohol to persons under 18 in some States or 21 in others, again such controls are found ineffective, and invite disrespect for the law. Most young people start experimenting with alcohol when considerably under the legal age—usually at around 14 years.

Preaching and scare tactics have also generally met with failure. People continue to drink, and a small but significant percentage drink to excess.

Parents as Teachers

The most influential teachers of responsible or irresponsible drinking customs are parents. Children tend to follow the drinking patterns of their families and their social group. Many see drinking occurring harmlessly

in their homes as a normal part of adult behavior. In some families, even young children are allowed to drink with their families on special occasions. Children and adults from such backgrounds are unlikely to respond well to a hard-line campaign against all alcohol as a "poison," or to accept the view that drinking is immoral—and they are unlikely themselves to abstain. Fortunately, such individuals do not seem to have problems as adults in controlling their drinking behavior, even though they may drink considerably.

On the other hand, children from strongly abstaining families who later rebel, or those from families in which there is uncertainty about alcohol—either because parents differ in their attitudes, or because what they say and what they do are clearly in disagreement—run a greater risk of developing drinking problems as adults.

TEACHING RESPONSIBLE DRINKING

Public education campaigns that stress only the dangers of alcoholism are unproductive. It is as if driver-education courses in schools were concerned only with the bloody results of speeding and reckless driving. This might frighten a few, but would not produce many students who know how to drive safely.

At the heart of many alcohol prevention programs today is the recognition that responsible drinking behavior depends largely on knowing how to drink.

Teachers now encourage individuals to assume responsibility for their own drinking behavior. They encourage abstinence for those who choose it, but accept the fact that many will choose to drink. Those who drink are helped to understand how alcohol may affect them, and to behave in a responsible manner in their use of alcohol.

The idea of teaching people to drink responsibly is not new. It is patterned on the safety approach to driving and other risky activities. It also draws on the experiences of those cultural groups which have shown over many centuries an ability to use alcoholic beverages with a minimum of danger.

Principles of Responsible Drinking

1. **It is not essential to drink.** The youth or adult who decides to abstain from alcohol for moral, health, economic, or any other reasons, should not be pressured to drink by other members of his group.
2. **Excessive drinking does not indicate adult status, virility, or masculinity.** One can no more establish his manhood by his ability to hold a large amount of liquor than by his ability to hold a large amount of dessert.
3. **Uncontrolled drinking or alcoholism is an illness.** Children, including the children of alcoholic parents, should be aware that alcoholism is not a perversity, not necessarily a character defect, and not even the

direct effect of drinking. They should know that an alcoholic, like a victim of diabetes or tuberculosis, is a sick person who can and should be helped.

4. **Responsible drinking depends on specific physiological as well as psychosocial factors.** These include:
   - early development of healthy attitudes toward drinking, within a stable family environment,
   - prevention of dangerous blood-alcohol levels by restricting drinking to small amounts, in appropriate dilution, and preferably in combination with food,
   - recognition that drinking is dangerous when used in an effort to solve emotional problems, and
   - universal agreement that drunkenness is not sanctioned by the group.

The latter point is particularly important. Being drunk is not funny. It is not a solution to problems. It is a condition in which a person has overdosed with a drug, and is particularly liable to poor judgment and actions.

5. **An understanding that "alcohol education" should not be restricted to "alcoholism education."** Instead, education on alcoholism and excessive drinking should be considered as only one phase of education about living, coping with life, and developing self-respect.

HOW TEENAGERS DRINK

Any effort to change the drinking habits and attitudes of people should be based upon understanding their current behavior and the reasons for it. Of particular interest are recent investigations of drinking practices among teenagers, who are the abstainers and drinkers of the next generation and a logical audience for prevention activities.

Drinking by High School Students

Studies involving 8,000 high school students were made over a 10-year period in New York, Wisconsin, Michigan, Utah, and Kansas. These show that the average American first *tastes* alcohol, usually in the way of an experimental sip, by the age of 10. As many as 50 to 85 percent of high school students say they drink at least occasionally.

Of the high school survey Dr. Robert Strauss has said: "These figures, however shocking they may seem, are meaningless in themselves. There is no proof to show that early exposure to alcohol will in itself lead to excessive drinking in later life. In fact, all the proof is clearly to the contrary."

Teenagers follow adult models in their drinking patterns. The best single indicator of the teenage drinking customs in any community is the adult pattern in the same community. If parents drink, there is a high probability that teenagers will drink; similarly, abstinent parents typically produce abstinent children.

For both adults and teenagers, drinking patterns vary with sex, social and economic status, religion, ethnic background, rural or urban residence, and other factors.

Other findings of the high school surveys were:

1. The average age at which students had their first drink was 13–14, although they may have tasted alcohol before.
2. The drinking is likely to be done at home with parents.
3. Practically every high school graduate will have experimented with at least one drink.
4. One in 4 users claimed to have been "high" on alcohol, at least once during the month prior to the survey, in the New York, Wisconsin, and Kansas studies.
5. One in 10 users in these studies reported having been "drunk" in this same period.
6. In all cases, beer was the most commonly used beverage.
7. Laws relating to teenage drinking had little relationship to drinking practices.

Effects of Family Attitudes

The rate of problem drinking among teenagers is apparently related to family attitudes toward drinking. For example, research has shown that children in Italian-American and Jewish families are exposed to alcohol at an early age—sometimes as young as 2 to 3 years—but grow up to have the lowest rates of alcoholism of any cultural groups in the United States. By contrast, some of the highest rates of alcohol dependence have been found in groups in which children are under strong pressure to refrain from drinking until they are 21.

A young person's decision to drink or not to drink apparently is made on the basis of a combination of forces, including the practices and wishes of his parents, the attitudes of his church, the influence of his friends, how much money he has to spend, and how strongly he feels the need to assert his independence from adult authority.

The majority of teenagers seem to have tasted alcohol on more than one occasion. Many of them have learned much in their own homes about its responsible use. Public education campaigns for both parents and students are beginning to assist in this vital process, and to reach those families troubled by a problem drinking member.

VII

THE HELPING NETWORK

Realization of the need for help with alcoholism problems during the past 30 years resulted in a patchwork of agencies and organizations—local and national, voluntary and governmental. With high enthusiasm and no central guidance, they often have competed when they should have cooperated. The result was that few men and women with drinking problems have received the best care available, and most have had no care at all.

This is changing, however, largely through the efforts of these same pioneering organizations. Together they have enlisted the active support of the Federal Government in a vigorous campaign to stimulate and unify the helping network of which they are a part. This new cooperation should mean improved services, both to help those with drinking problems overcome their illness, and to encourage those without such problems to drink responsibly, or abstain.

VOLUNTARY ORGANIZATIONS

Several national voluntary organizations concerned with alcoholism have devoted their efforts to public education, research, and community treatment and prevention services.

Alcoholics Anonymous, described on page 29, is probably the best known. AA, unlike some of the other organizations, does not take part in political or public policy actions related to alcohol problems. Its activities center on helping alcoholic people get sober, stay sober, and work out better patterns of living. AA is accessible through thousands of local chapters that are usually listed in telephone directories.

The National Council on Alcoholism (NCA), a member of the National Health Council, provides national leadership in public education, advocacy of enlarged Government involvement in the alcoholism field, and consultation services—particularly to industry. Through more than 100 member councils across the country, information and referral services are

offered at the community level to problem drinkers and their families, and short-term pretreatment counseling as well.

The Alcohol and Drug Problems Association of North America is comprised of administrators of government-supported programs for alcoholism treatment, education, and research. It encourages exchange of ideas and information between publicly and privately sponsored organizations, and offers information on State and local government-supported alcoholism programs.

The Salvation Army and the **Volunteers of America** have provided substantial care and shelter for homeless alcoholic men and women. Most facilities sponsored by the Salvation Army provide food, shelter, and rehabilitation services, including halfway houses.

GOVERNMENT-SPONSORED ALCOHOLISM PROGRAMS

In addition to alcoholism programs for Federal employees, the Federal Government sponsors many programs of research, treatment, prevention, and training.

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) provides policy guidance for Federal action on alcohol-related problems, and channels funds for research, training, prevention planning, and development of community-based services for treatment of alcoholic persons, a national information and education program, and other special projects such as those for drinking drivers, alcoholic employees, American Indians, groups in poverty, and public inebriates.

The Department of Transportation (DOT) collaborates with the NIAAA in a major campaign aimed at reducing the thousands of deaths and hundreds of thousands of disabling injuries and traffic arrests annually caused by alcohol-impaired drivers. This includes an information campaign on the relation of drinking to driving hazards, and assistance in development of community-centered Alcohol Safety Action Projects—which have the objective of bringing drinking drivers to treatment.

The Veterans Administration Hospitals conduct the largest alcoholism treatment and research program in the country. About 100,000 patients with primary or secondary alcoholic diagnoses are treated yearly. Eligible veterans receive alcoholism treatment at no charge. Treatment for acute intoxication is available at any VA hospital in the country, and many now offer comprehensive followup treatment and rehabilitation services.

At the State Government level, State alcoholism authorities are established by the legislatures and their directors designated by the Governors. Through these agencies, medical, psychiatric, social, and rehabilitation services are administered. Quantity and quality of these services vary from State to State. Information about State-supervised facilities and services within counties and communities may be obtained from each State alcoholism agency.

The Military Services have established programs and services related to problem drinking and alcoholism. The National Institute on Alcohol

Abuse and Alcoholism provides consultation to the Department of the Army's Alcoholism and Drug Abuse Assistance Team. The team, comprised of representatives of the Continental Army Command, the Office of the U.S. Surgeon General, as well as the NIAAA, travels to military installations throughout the United States and abroad to assist in establishing alcoholism programs for military personnel. The team members have also participated in special seminars and workshops for such groups as the Army War College, the Command and General Staff College, and the military academies. NIAAA provides similar consultation for the other branches of the Armed Forces.

INDUSTRIAL PROGRAMS

Employed alcoholic men and women are estimated to make up about 5 percent of the Nation's labor force, and perhaps 10 percent of the executives. There are estimated to be about 4.5 million problem drinkers in business, industry, and government.

Ever since 1947, when Consolidated Edison of New York began a company program to rehabilitate instead of firing alcoholic employees, other companies followed with similar programs. More than 300 companies have now acted to help employees whose job performance suffers through their use of alcohol.

Organized labor has become involved. Programs for alcoholic employees have been included in contract agreements. The unions also have developed their own training programs and provide services for their members in trouble with alcohol.

The drinking problems of alcoholic employees are usually identified and treatment is offered at an earlier stage of the disease than the problems of unemployed persons. Chances for successful recovery are often better: physical health has deteriorated less, financial resources are not gone, emotional support exists in the family and community, and the threat of job loss motivates for recovery. These factors contribute to the average 50 to 70 percent recovery rate reported from successful industrial programs.

GENERAL CARE-GIVING RESOURCES

Specialized alcoholism clinics and programs reach some of those in need of help. However, many more individuals with alcohol problems are already in contact with other agencies which, while not primarily devoted to caring for alcoholics, do or could offer important services to these persons. These include hospitals, welfare agencies, family and community services, legal aid, employment, and other care-giving service organizations.

General hospitals, for example, admit many alcoholic individuals for conditions unrelated to alcoholism—or for alcohol-related problems "covered" by other diagnoses. Similarly, many patients in tuberculosis

hospitals have alcohol problems. The prison system holds many men and women with drinking problems. It has been estimated that between 10 and 25 percent of welfare cases involve alcoholism.

Recognition of the alcoholism problems of patients, clients, and inmates and referral to treatment resources would bring help to many more who need it.

Hospitals

State mental hospitals have long carried the load of inpatient care for alcoholism. The 321 State mental hospitals together have a daily census of 37,000 patients with alcoholic diagnoses. In about 90 percent of the State hospitals, there are no special alcoholism wards or programs, and little or no treatment for problem drinking is provided. The 10 percent that do have special programs use group psychotherapy and alcoholism lectures, discussions, and movies, combined with AA meetings.

Private posychiatric hospitals have also contributed to the care of alcoholic individuals, and this patient load is growing.

Although general hospitals have been reluctant to accept alcoholic men and women as patients, many perform vital services in providing outpatient emergency room and ward care for those suffering from acute intoxication, as well as inpatient care on both their psychiatric and general wards for chronic alcoholism-related patients.

The American Medical Association and the American Hospital Association have recommended that the general hospital be the "primary point of attack [on alcoholism] . . . because of the completeness of its facilities and of its accessibility; it is the logical place to which an alcoholic or his family would turn."

Community Mental Health Centers

The treatment and control of alcoholism depend heavily upon the quality and range of mental health services in the community.

A survey of the Nation's 170 community mental health centers showed that at least 130 treat alcoholic patients, and 46 percent have special programs for alcoholic persons. Almost all centers make available to alcoholic patients the five basic services: inpatient and outpatient care, partial hospitalization, 24-hour emergency service, consultation, and education.

Private Physicians

Because alcoholism is a disease, treatment should logically begin under the direction of a physician. But in the past, many physicians, like the hospitals with which they have been affiliated, have preferred not to deal with alcoholic patients. At least partly responsible is the teaching

program of medical schools. Until recently almost no courses on alcoholism were included in their curriculums.

This situation is beginning to change under pressure from professional organizations, grant support from the National Institute on Alcohol Abuse and Alcoholism, and the demands of medical students themselves. The Student American Medical Association in a resolution passed at the 1971 Annual Convention urged medical colleges to "include training in the disease concept of alcoholism . . . directed toward the production of students who have both factual knowledge and a compassionate attitude with which to treat the alcoholic."

The Role of Health Insurance

For the alcoholic man or woman considering treatment, having health insurance may spell the difference between seeking and neglecting help. While most companies once declined to include the treatment of alcoholism in health insurance policies, many now provide some kind of coverage. The degree of coverage varies in different areas and for different insured groups. Some provide coverage only for the acute phase. Others cover only long-term treatment.

Like other influential groups, the insurance industry is becoming more responsive to the needs, rights, and demands of alcoholic individuals, and is accepting new responsibility for underwriting their care.

WHERE TO WRITE OR CALL FOR HELP

The National Institute on Alcohol Abuse and Alcoholism collects and distributes current information on all aspects of alcohol, drinking, and alcoholism of professional and public interest. It also maintains a State-by-State listing of most public and private alcoholism treatment facilities. For answers to specific questions about alcohol abuse and alcoholism, and for local lists of treatment facilities, write to:

National Clearinghouse for Alcohol Information
Box 2345
Rockville, Maryland 20852

Other sources of information and referral to local facilities can be obtained from such national organizations as:

Alcoholics Anonymous
P.O. Box 459
Grand Central Station
New York, N. Y. 10017

Local Alcoholics Anonymous chapters, Al-Anon Family Groups, and some Alateen, are listed in most telephone directories.

The NCA offers a list of nonprofit organizations in more than 100 cities that will refer clients to physicians, public and private agencies providing treatment for alcoholism. Some of these local organizations not only provide such information, but also offer counseling and treatment services.

Alcohol and Drug Problems Association of
North America
1101 15th Street, N.W. Suite 204
Washington, D.C. 20005

The Association can provide a list of State government-supported agencies concerned with alcoholism.

Veterans Administration
Alcohol and Drug Dependent Service
810 Vermont Avenue, N.W.
Washington, D.C. 20420

Any veteran discharged under "conditions other than dishonorable" may be eligible for VA medical benefits; eligible veterans receive alcoholism treatment at no charge. Treatment of acute intoxication is available at any VA hospital in the country. Many VA hospitals also offer comprehensive treatment and rehabilitation services for alcoholic patients.

The Salvation Army
120 West 14th Street
New York, N.Y. 10011

Most facilities of the Salvation Army provide food, shelter, or rehabilitation, and include halfway houses. In some areas, the organization provides a broad range of other services for alcoholic persons.

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